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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,168	03/26/2004	Richard D. Eyestone	SMRT001US0	7981

48746 7590 07/14/2006

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EXAMINER

HSU, RYAN

ART UNIT	PAPER NUMBER
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3714

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/810,168	EYESTONE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ryan Hsu	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

In response to the amendments filed on 4/13/06, claims 1, 10, 14, 18, 19, and 21 have been amended. Claims 1-21 are pending in the current application.

#### ***Claim Objections***

Claim 21 is objected to because of the following informalities: claim 21 contains the limitation of "5. (new)" at the end of the claim. Examiner has interpreted this as a typographical error and suggests that the appropriate correction be made.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 6,402,634 B2).**

Regarding claim 10, Lee teaches a method of sport instruction comprising the steps of: inserting an electronic components units into a shaft of a sports device; generating by the electronic components linear and angular measurements in three axes during a swing of a sport device (*see col. 1: ln 50-56, col. 5: ln 43-58, col. 6: ln 35-42*). Lee's system then transforms the linear acceleration measurements and the angular rate measurements to an internal memory

source (*see col. 3: ln 18-25*). The measurements as taught by Lee are then transformed into swing information corresponding to the swing of the sport device and displayed on the display of a console (*see col. 1: ln 48-62*). However Lee is silent with regards to an embodiment of the invention that incorporates a RF link box to be used for a wireless connection. However, in the description of the related prior art Lee references Evans which discloses that swing information is old and well known in the art at the time the invention was made to transfer data analysis information to a remote device using FM radio signals (*see col. 2: ln 22-37*). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Evans as an alternative choice that is well known in the art to transfer data between remote devices.

**Claims 1-3, 6-9, and 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 6,402,634 B2) and in view of Zeiner-Gundersen (US 5,941,779).**

Regarding claims 1 and 18, Lee teaches an intelligent sport device system for measuring a swing, comprising: a shaft containing an inserted electronic components unit. The electronic components comprising: a plurality of accelerometers capable of producing linear acceleration measurements of the sports device in three axes during a swing of the sport device (*see col. 7: ln 20-55*); a plurality of sensors capable of producing angular rate measurements of the sports device in three axes during the swing of the device and an RF transmitter for transmitting the linear acceleration measurements and the angular rate measurements (*see col. 1: ln 50-56, col. 5: ln 43-58, col. 6: ln 35-42*). Lee also teaches the system implement the use of an RF link box for

receiving the transmissions of the linear acceleration measurements and the angular rate measurements from an RF transmitter (*see Fig. 1 and col. 1: ln 50-56*). Additionally, the system incorporates a logic system to transform the linear acceleration and angular rate measurements from the RF into swing information corresponding to the swing of the sport device (*see Fig. 8 and the related description thereof*). Furthermore, Lee's system teaches the use of a display for displaying the swing information. However, Lee is silent with regards to the use of gyroscopes for recording the angular rate measurements and simply states that its calculations are made using an angular rate sensor manufactured by Crossbow Technologies, Inc. (*model # CGX500M1*) (*see col. 6: ln 35-42*).

Zeiner-Gunderson teaches in an analogous swing-training device the implementation of gyros for indicating rotational rate measurements. Zeiner teaches the implementation of a gyroscope as a simple and effective way to provide the system with sensing the forces applied on by the users swing without adding restrictive forces that might otherwise skew the data of the swing (*see col. 2: ln 1-42*). Zeiner teaches that this allows the user to get a more accurate reading without affecting the users "natural swing". Therefore one would be motivated to implement gyroscopes in measuring the swing of a sports instruction device in order to allow for the user to maintain their natural swing while taking accurate results (*see col. 3: ln 5-20 and ln: 48-62*). Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to incorporate the gyroscopes of Zeiner with the golf club system of Lee in order to create a golf club device that would help improve a users swing while taking more accurate measurements.

Regarding claim 2-3, Lee teaches an intelligent sport device system wherein the shaft is the shaft of a golf club and the shaft serves as a joystick of a video game controller (*see Fig. 1 and the related description thereof*).

Regarding claims 8-9, Lee teaches an intelligent sport device that comprises logic for marking the swing as a reference swing (*see calibrate obd [396] of Fig. 9 and the related description thereof*). Furthermore, Lee teaches a device for transmitting the linear acceleration measurements and the angular rate measurement to a remote location, which receives and processes the logic, based upon the transmitted data and displays the information to the user (translational and rotational measurements) (*see col. 11: ln 42-63*).

Regarding claims 8 and 16, Lee teaches a method comprising a step of designating the swing a swing of interest (*see FIGS. 12 and 13 and the related descriptions thereof*).

Regarding claims 9, 17, and 21, Lee teaches an intelligent sport instruction device comprising the steps of transmitting the linear acceleration measurements and the angular rate measurements to a remote location and receiving instruction information from the remote location based upon the transmitted linear acceleration and angular rate measurements (*see FIG. 10 and the related description thereof*). Furthermore, Lee teaches displaying the instruction information on a display (*see FIG. 9 and the related description thereof*).

Additionally, Lee teaches the implementation of a sports instruction device as discussed above. However it is silent with regards to the ability to transfer the swing detection components from one club to another. Although Lee's invention does teach its ability to be adapted to any type of golf device it is silent about removing the components and mounting them onto another sport device.

However, Zeiner-Gundersen teaches that it analogous swing device may be mounted on a standard sporting device in place of a convention head or shaft. One would be motivated to provide this feature in order to allow for the ease of use for the user and also create a more adaptable swing device. Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to incorporate the portability and adaptability of Zeiner-Gundersen's sports instruction device into the golf swing device of Lee to create a more portable and adaptable sports instruction device.

Regarding claims 14 and 19, Zeiner-Gundersen teaches a sports instruction device wherein the electronic components are mounted on a board such that the board and the electronic components may be removed from the shaft and reinserted into a second shaft for producing and transmitting linear acceleration and angular rate measurements corresponding to a swing of the second shaft (*see abstract*).

Regarding claims 6-7, 15, and 20, Zeiner-Gunderson teaches a sports instruction device comprising a determining step of whether the board and electronic components are inserted into the original shaft or the second shaft and transmitting information concerning whether the electronic components are inserted into the original shaft or the second shaft to the RF link box (*see abstract*).

**Claims 4-5, 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. and Zeiner-Gundersen as applied to claims above, and further in view of Hammond (US 3,945,646).**

Lee and Zeiner-Gundersen both teach a sports instruction device that incorporates a computer to process the information collected by sensors located on a golf club device. However, they are silent with regards to its implementation with other sports that incorporate swings. However, Hammond in an analogous swing measurement system and method he states that it would be appreciated by those skilled in the art that the swing measurement techniques taught in his swing instructional device would likewise be utilized with other athletic implements such as baseball bats, tennis rackets and the like. Therefore it would obvious to one of ordinary skill in the art in light of teachings in Hammond to incorporate the swing measurement devices into other sports that have similar swing movements such as golf.

Regarding claim 4-5, 11-13, Hammond teaches a sports instruction device wherein the shaft is the shaft of a golf club, the shaft of a racket (*ie: tennis racket, racquetball racket*) or the shaft of a bat (*see col. 1: ln 65-col. 2: ln 6*).

### ***Response to Arguments***

Applicant's arguments filed 4/13/06 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the electronic components are located only in the shaft) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). However, even if this language were to be incorporated into the claims it would not prevent the



prior art from anticipating or rendering it obvious to one of ordinary skill in the art at the time of the invention to only incorporate the electronic devices in the shaft of the club.

With regard to applicant's arguments that Lee in view of Zeiner-Gunderson do not teach or suggest an "electronic components unit inserted into the shaft" of the sports device, the Examiner respectfully disagrees. Both Lee and Zeiner-Gunderson teach the integration of electronic components into a sporting device in order to measure information generated by a swing of the device. These electronic devices are integrated internally into the device and whether they are integrated into the shaft or the club head would not have been a patentable distinction from the prior art. As it would have been an obvious matter of design choice for one of ordinary skill in the art at the time the invention was made to integrate the electronic components into the shaft as opposed to the club because this would merely be a design consideration and therefore fails to patentably distinguish over Lee and Zeiner-Gunderson. The arguments regarding claims 4-5 and 11-13 are also directed towards the lack of solely placing the electronic components in the shaft of the sporting device and the Examiner directs the Applicant's representative to the explanation provided above.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

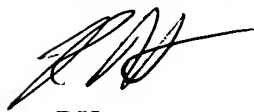
**Cobb et al. (US 4,759,219) – Swing Parameter Measurement System.**

Art Unit: 3714

Any inquiry concerning this communication or earlier communication from the examiner should be direct to Ryan Hsu whose telephone number is (571)-272-7148. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.

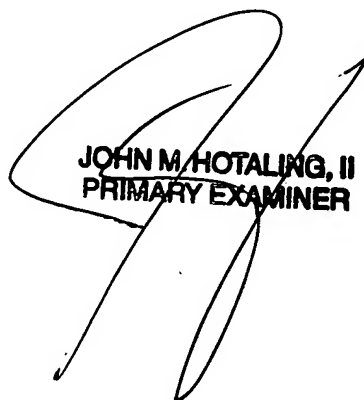
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert P Olszewski can be reached at (571)-272-6788.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, contact the Electronic Business Center (EBC) at 1-866-217-9197 (toll-free).



RH

July 6, 2006



**JOHN M. HOTALING, II**  
**PRIMARY EXAMINER**